What is claimed is:

1. An isolated peptide comprising phenylalanine, leucine, alanine, and lysine residues, wherein:
the peptide is about 5 to about 23 amino acids in length; and
the peptide is at least about 50% phenylalanine, leucine, alanine, and lysine residues.

2. The peptide of claim 1, wherein the peptide is about 5 to about 20 amino acids in length.

3. The peptide of claim 1, wherein the peptide consists essentially of phenylalanine, leucine, alanine, and lysine residues.

4. The peptide of claim 1, wherein the peptide consists of phenylalanine, leucine, alanine, and lysine residues.

5. The peptide of claim 1, wherein the first amino acid of the peptide is valine.

6. The peptide of claim 1, wherein the peptide is at least about 70% identical to SEQ ID NO:2, SEQ ID NO:16, SEQ ID NO:126, SEQ ID NO:4, SEQ ID NO:14, SEQ ID NO:17, SEQ ID NO:25, SEQ ID NO:43, SEQ ID NO:75, SEQ ID NO:84, SEQ ID NO:115, or SEQ ID NO:132.

7. The peptide of claim 1, further defined as SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:41, SEQ ID NO:43, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:71, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:77, SEQ ID NO:80, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:85, SEQ ID NO:86, SEQ ID NO:87, SEQ ID NO:90, SEQ ID NO:91, SEQ ID

NO:92, SEQ ID NO:93, SEQ ID NO:106, SEQ ID NO:108, SEQ ID NO:112, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:126, SEQ ID NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:131, SEQ ID NO:132, SEQ ID NO:137, SEQ ID NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145, SEQ ID NO:152, SEQ ID NO:159, SEQ ID NO:162, SEQ ID NO:163, SEQ ID NO:164, or SEQ ID NO:165.

8. A method for inhibiting the growth of cancer cells, the method comprising contacting the cancer cells with a peptide; wherein:

the peptide comprises phenylalanine, leucine, alanine, and lysine residues;

the peptide is about 5 to about 23 amino acids in length; and

the peptide comprises at least about 50% phenylalanine, leucine, alanine, and lysine residues.

9. The method of claim 8, wherein the peptide is about 5 to about 20 amino acids in length.

10. The method of claim 8, wherein the peptide consists essentially of phenylalanine, leucine, alanine, and lysine residues.

11. The method of claim 8, wherein the peptide consists of phenylalanine, leucine, alanine, and lysine residues.

12. The method of claim 8, wherein the first amino acid of the peptide is valine.

13. The method of claim 8, wherein the peptide is at least about 70% identical to SEQ ID NO:2, SEQ ID NO:16, SEQ ID NO:126, SEQ ID NO:4, SEQ ID NO:14, SEQ ID NO:17, SEQ ID NO:25, SEQ ID NO:43, SEQ ID NO:75, SEQ ID NO:84, SEQ ID NO:115, or SEQ ID NO:132.

14. The method of claim 8, wherein the peptide is SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:32, SEQ ID NO:35, SEQ ID NO:46, SEQ ID NO:51, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:60, SEQ ID NO:68, SEQ ID NO:75, SEQ ID NO:86, SEQ ID NO:152, or SEQ ID NO:162.

15. The method of claim 8, wherein the contacting step is performed *in vivo*, *in vitro*, topically, orally, transdermally, or by systemic injection.

16. The method of claim 8, wherein the contacting step is performed *in vivo*, and the concentration of the peptide is about 1 mg/kg and about 100 mg/kg.

17. The method of claim 8, wherein the contacting step is performed *in vitro* or topically, and the concentration of the peptide is at least about 0.1 μM.

18. The method of claim 8, wherein the cancer cells are lymphoma, leukemia, melanoma, squamous, or carcinoma cells.

19. The method of claim 8, wherein the cancer cells are breast cancer cells, colon cancer cells, lung cancer cells, cervical cancer cells, corneal cancer cells, epitheleal cancer cells, or prostate cancer cells.

20. The method of claim 8, whereby the growth of cancer cells is reduced by at least about 10% as compared to the growth of cancer cells without treatment with the peptide.

21. A method of treating an animal, the method comprising administering to the animal a peptide, wherein:
the animal contains cancer cells;
the peptide comprises phenylalanine, leucine, alanine, and lysine residues;
the peptide is about 5 to about 23 amino acids in length; and
the peptide comprises at least about 50% phenylalanine, leucine, alanine, and lysine residues.

22. The method of claim 21, wherein the peptide is about 5 to about 20 amino acids in length.

23. The method of claim 21, wherein the peptide consists essentially of phenylalanine, leucine, alanine, and lysine residues.

24. The method of claim 21, wherein the peptide consists of phenylalanine, leucine, alanine, and lysine residues.

25. The method of claim 21, wherein the first amino acid of the peptide is valine.

26. The method of claim 21, wherein the peptide is at least about 70% identical to SEQ ID NO:2, SEQ ID NO:16, SEQ ID NO:126, SEQ ID NO:4, SEQ ID NO:14,

SEQ ID NO:17, SEQ ID NO:25, SEQ ID NO:43, SEQ ID NO:75, SEQ ID NO:84, SEQ ID NO:115, or SEQ ID NO:132.

27. The method of claim 21, wherein the peptide is SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:32, SEQ ID NO:35, SEQ ID NO:46, SEQ ID NO:51, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:60, SEQ ID NO:68, SEQ ID NO:75, SEQ ID NO:86, SEQ ID NO:152, or SEQ ID NO:162.

28. The method of claim 21, wherein the contacting step is performed *in vivo*, topically, orally, or transdermally.

29. The method of claim 21, wherein the contacting step is performed *in vivo*, and the concentration of the peptide is about 0.1 mg/kg to about 100 mg/kg.

30. The method of claim 21, wherein the contacting step is performed topically, and the concentration of the peptide is at least about 0.1 μM.

31. The method of claim 21, wherein the cancer cells are lymphoma, leukemia, melanoma, or carcinoma cells.

32. A method for inhibiting the growth of microbial cells, the method comprising contacting the microbial cells with a peptide; wherein:

the peptide comprises phenylalanine, leucine, alanine, and lysine residues;

the peptide is about 5 to about 23 amino acids in length; and

the peptide comprises at least about 50% phenylalanine, leucine, alanine, and lysine residues.

33. The method of claim 32, wherein the peptide is about 5 to about 20 amino acids in length.

34. The method of claim 32, wherein the peptide consists essentially of phenylalanine, leucine, alanine, and lysine residues.

35. The method of claim 32, wherein the peptide consists of phenylalanine, leucine, alanine, and lysine residues.

36. The method of claim 32, wherein the first amino acid of the peptide is valine.

37. The method of claim 32, wherein the peptide is at least about 70% identical to SEQ ID NO:2, SEQ ID NO:16, SEQ ID NO:126, SEQ ID NO:4, SEQ ID NO:14, SEQ ID NO:17, SEQ ID NO:25, SEQ ID NO:43, SEQ ID NO:75, SEQ ID NO:84, SEQ ID NO:115, or SEQ ID NO:132.

38. The method of claim 32, wherein the peptide is SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:41, SEQ ID NO:43, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:60, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:77, SEQ ID NO:80, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:86, SEQ ID NO:87, SEQ ID NO:93, SEQ ID NO:106, SEQ ID NO:108, SEQ ID NO:112, SEQ ID NO:115, SEQ ID NO:126, SEQ ID NO:128, SEQ ID NO:162, SEQ ID NO:163, SEQ ID NO:164, or SEQ ID NO:165.

39. The method of claim 32, wherein the peptide is SEQ ID NO:2, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:25, SEQ ID NO:30, SEQ ID NO:35, SEQ ID NO:58, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:80, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:85, SEQ ID NO:86, SEQ ID NO:106, SEQ ID NO:108, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:126, SEQ ID NO:128, SEQ ID NO:131, SEQ ID NO:143, SEQ ID NO:163, or SEQ ID NO:165.

40. The method of claim 32, wherein the contacting step is performed *in vivo*, *in vitro*, topically, orally, transdermally, or by systemic injection.

41. The method of claim 32, wherein the contacting step is performed *in vivo*, and the concentration of the peptide is about 0.1 mg/kg to about 100 mg/kg.

42. The method of claim 32, wherein the contacting step is performed *in vitro* or topically, and the concentration of the peptide is at least about 0.1 μM.

43. The method of claim 32, whereby the growth of microbial cells is reduced by at least about 50% as compared to the growth of microbial cells without treatment with the peptide.

44. The method of claim 32, wherein the microbial cells are bacterial cells.

45. The method of claim 44, wherein the bacterial cells are *Staphylococcus*, *Stapholococcus aureus*, *Pseudomonas*, *Pseudomonas aeruginosa*, *Chlamydia*, or *Escherichia* cells.

46. The method of claim 44, wherein the bacterial cells are gram positive bacteria, gram negative bacteria, or mycobacteria.

47. The method of claim 32, wherein the microbial cells are fungal cells.

48. The method of claim 47, wherein the fungal cells are *Candida*, *Candida albicans*, *Saccharomyces*, *Saccharomyces cerevisiae*, *Schizosaccharomyces*, or *Schizosaccharomyces pombe* cells.

49. The method of claim 32, wherein the microbial cells are protozoa.

50. The method of claim 49, wherein the protozoa are *Trypanosoma cruzi* or *Plasmodium falciparum*.

51. The method of claim 32, wherein the microbial cells are intracellular organisms.

52. The method of claim 32, wherein the microbial cells are viruses.